

# REVERSING POLY CYSTIC OVARIAN SYNDROME AMONG WOMEN IN REPRODUCTIVE AGE GROUP- AN EVIDENCE BASED CASE STUDY FROM KERALA, INDIA

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## ABSTRACT

*Nature has given us immense resources to live peacefully on this planet earth. Yet human beings seldom forget about those and go behind the lifestyles that are not suitable for them. The result is growing number of lifestyle diseases and increase in health issues irrespective of gender. Studies have shown that one out of eight women in India is suffering from Poly Cystic Ovarian Syndrome and its associated disorders. PCOS has become a growing issue among women in reproductive age group especially. There are many factors that are responsible for this and unfortunately, there is no proper solution for this condition. Henceforth the present study was designed to understand the effect of naturopathy on reversing PCOS among women. The study was carried out in different naturopathic clinics located in various parts of the state of Kerala. Judgemental sampling was used for the sample selection after getting the consent and ethical clearance from the respective samples and institutions. It was found that effective life style management with intermittent or periodic fasting following a naturalistic diet regime strictly avoiding processed foods, concentrating on whole grains, vegetables, fruits, sprouts and microgreens have shown dramatic improvisations in the health of women suffering from polycystic ovarian syndrome. Seed cycling has also helped the samples to regulate their menstrual cycles to a regular mode. Yoga and meditation along with 5 days of walking for 30 minutes a day with a mild sunbath increases immunity and wellbeing among the cohorts selected for the study.*

**KEYWORDS:** Poly Cystic Ovarian Syndrome, Naturopathy, Yoga and Meditation & Seed Cycling

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## INTRODUCTION

One of the very common health issues/ endocrine disorders faced by the women in the reproductive age group in India is Poly Cystic Ovarian Syndrome and its related health issues. The prevalence rate of PCOS among women in this age group in India is quite alarming, ie about 36 percent of the population, ie three in every ten women suffers from PCOS and associated disorders. The symptoms and characteristics vary among person to person and the steady reason for this is still unknown. Being an endocrinal disorder, it is treated as a life style disease and the associated risk are innumerable. Obesity or overweight, hirsutism, glucose intolerance, insulin resistance, mood swings, hormonal imbalances, irregular periods, menstrual pain, heavy bleedings, formation of clots, swellings in the body, infertility, pain during sexual intercourse are just a few among them. The life of the person suffering from the disease is tragic by all means- physical, emotional, and social. No proper medications are available for the same in any form of medicines. Pain killers, metformin tablets, and similar medications are only being prescribed for the condition.

It is said that nature has a great healing power to cure the mind and the body alike, not only among human beings, but on all living organisms. Naturopathy is a form of alternative medicine, which believes in non-invasive techniques and allows the body to heal itself. It is an art and science of self healing and a drugless system of medicine based on sound philosophy.

## **MATERIALS AND METHODS**

### **Subjects**

The study participants were 50 in-patients selected from three naturopathy centers located at three different parts such as Kannur, Thrissur and Varkala of the State of Kerala, representing the North, Central and Southern parts. Individual consents were obtained from the participants after getting clearance from the hospital authorities. The study was approved by the Ethical committee of the respective hospitals. Women in the reproductive age group of 15- 45 years of age were selected for the study. The patients were admitted in these centers due to one or more of the conditions like Hyperandrogenism, Amenorrhea, Endometriosis, Adenomyosis, Fibroid, Multiple cyst in the ovaries etc. The exclusion criteria include women above 45 years of age, and those who were on any oral or intra uterine contraceptives or those who had undergone any other surgeries.

### **METHOD**

In depth interviews, Pre-post clinical examinations, focal group discussions and case studies were carried out for collecting appropriate data from the samples.

### **Study Design**

Fifty women with PCOS were randomly selected from the hospitals using Judgmental Sampling Method. A well-structured interview schedule was used to record the information related to the samples. In depth interviews and clinical reports were collected from a subsample of 6 cohorts for detailed understanding.

### **Clinical Parameters Studied**

The ovarian Morphology of all the samples selected for the study were analyzed with the help of medical practitioners and radiologists. Transabdominal three-dimensional sonogram of the pelvis was also carried out. This was done before and after the intervention programme. All the samples exhibited multiple chocolate cysts in both the ovaries, oedema and severe mood swings, especially during the menstrual days.

### **Treatment Pattern in Naturopathy**

Naturopathy believes in healing the natural way without disturbing the eco system. It is a form of alternative medicine which works on natural, non usage of drugs, or invasion or surgery and believes in self healing of the body. For a patient suffering from Poly Cystic Ovarian Syndrome and associated risk factors the treatment pattern includes life style modification and diet therapy consisting of therapeutic fasting.

Depending upon the clinical parameters and health condition of the patient, therapeutic fasting is advised to them for a continuous period of 9 days, 11 days, 14 days and sometimes up to 21 days. **Therapeutic fasting** ensures complete abstinence from all sorts of food for a definite period of time. During the period of fasting, the patients were given tender coconut water or lemon juice infused with honey along with water boiled with cumin seed/ coriander seed. Further, they were put on a juice diet either with low glycemic fruits or vegetable juices without sugar. Thereafter the patient is given

raw vegetables to restart the digestion process which is followed by a boiled vegetable diet and later by a normal diet. While fasting, it stimulates autophagy and detoxes the enzymes, which results in deep cleansing of the cells and tissues. This process rejuvenates the cells in the body and also exfoliates the dead cells. Once the patient is back to normal diet the dormant cells gets activated and helps to build new structures. Significant weight loss, abdominal reduction, clear skin, changes in the blood-glucose and cholesterol levels, decreased blood lipid and liver enzymes are the major changes happening as a result of therapeutic fasting.

**Sun** is an excellent source of Vitamin D and is the greatest form of energy to nature. The patients are also advised to get at least 20 minutes of exposure to sunlight in the early morning just after sunrise and before sunset. Sunbath has proved to be very effective for patients with bronchial asthma, allergic dermatitis, eczema, sinusitis, psoriasis and rheumatism.

**Mudpacks** using clay or wet packs wrapped with wet towels were also administered to the patients depending on their individual body needs and physiological conditions.

**Hip bath** which was proven to be highly effective for menstrual disorders were administered to the patients, where they are advised to sit in mildly hot water in specifically designed tubs for about 20 minutes, dipping the body from chest to above the knee. It also helps to reduce back pain, activates kidney and other genito-urinary organs.

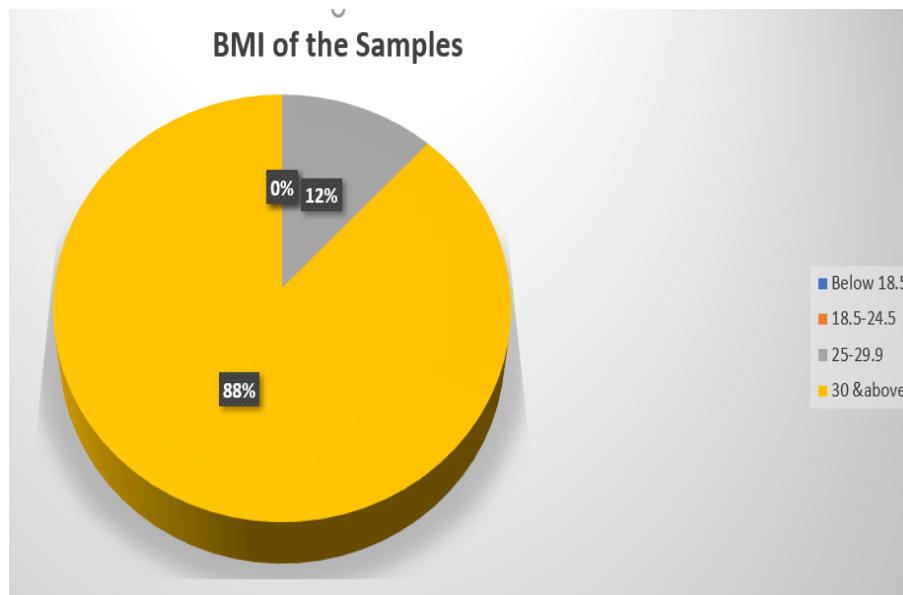
The miraculous curative properties of **yoga and meditation** were also found to be very effective for all types of stress related disorders as well as to tone the body. Breathing exercises including kapalbathi (bonus breathing technique), sun salutations, poses like butterfly pose, cobra, bow, plank, boat and camel poses were also be trained with the help of yoga experts, which are followed by deep relaxation and meditation techniques.

**Seed Cycling** is a naturopathic way of balancing the hormones among women. It is believed to regulate the hormones such as estrogen and progesterone in the first and second half of the menstrual cycles. It involves eating certain seeds at specific time periods. Those who follow this therapy are referred to as seed eaters. This includes incorporating flax seed and pumpkin seeds from day one of the menstrual cycle for 14 continuous days. During this follicular phase, one tablespoon each of freshly ground seeds, which can be included in salads or juices. During the luteal phase, ie on the second half of the cycle equal quantity of sunflower seed and white sesame seeds were being eaten by the seed eaters. This will be continued for a period of three months regularly and has found amazing effects on the hormonal imbalances among women with PCOS. The nutrients such as Zinc, Vit E, Selenium and phytoestrogens help to regulate the levels and production of estrogen and progesterone respectively.

## **MAJOR FINDINGS**

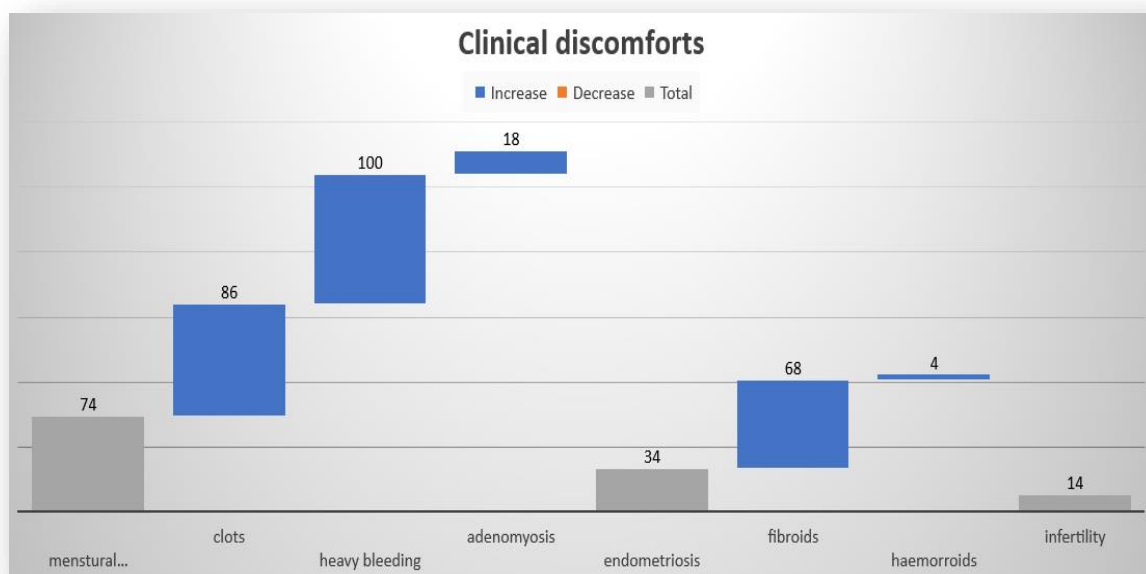
### **Anthropometric Measurements**

The anthropometric measurements of the samples were done which includes measurement of height, weight, mid arm circumferences, waist-hip ratio etc. the Body Mass Index(BMI) of the samples were also calculated.



**Figure1: Body Mass Index of the Samples.**

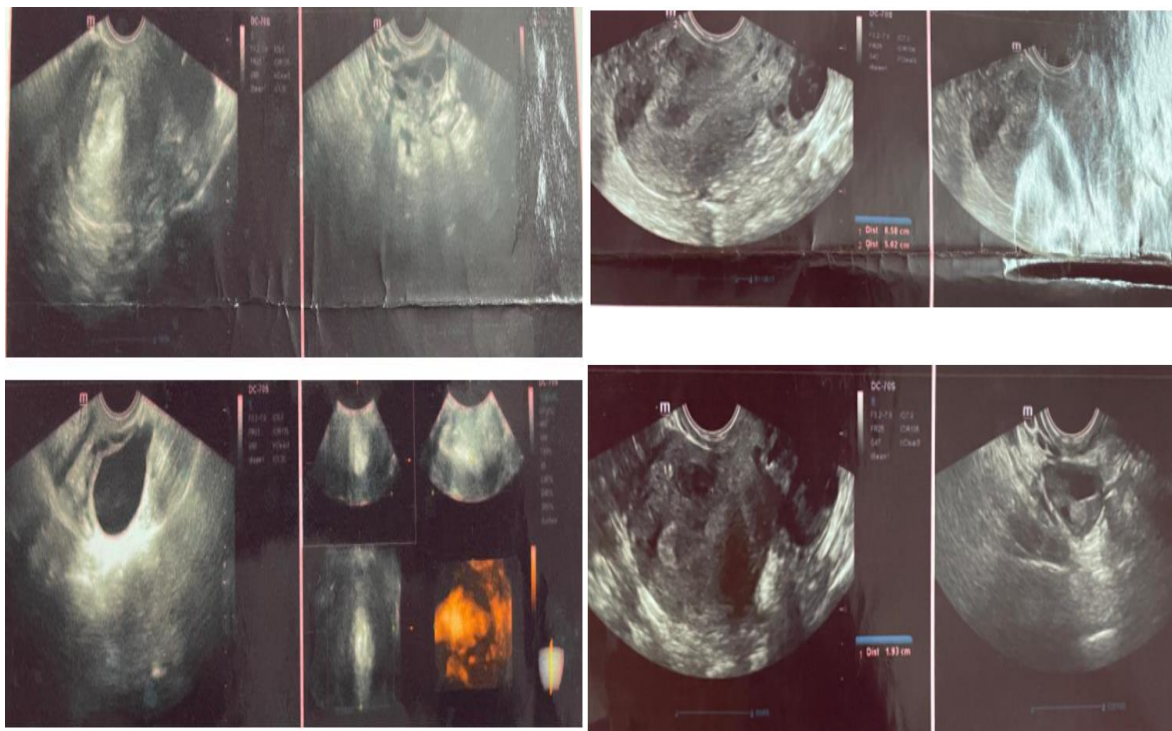
It was found that 88 percent of the samples falls under the BMI category of 30 and above; ie Obese, and 12 percent of the samples were on overweight category; ie between 25-29.9.



**Figure 2: Clinical Discomforts Reported by the Samples.**

### Ailments/ Disorders among the Samples

It was reported that menstrual irregularities (74 %), clots (86%), adenomyosis (18%), endometriosis (34%), fibroids (68%), hemorrhoids (4%) and infertility (14%) were the most common issues faced by the samples. All the samples reported heavy bleeding and mood swings during the menstrual days. About 28 percent reported childhood obesity, 94 percent reported hirsutism and 7 percent reported sleep disturbances.



**Figure 3: Before and After Treatment - Transvaginal Scan Reports of the Samples.**

It was observed from the case studies that all the cohorts exhibited mild or moderate form of fatty liver before the treatment and was found to be normal in the scan reports after the treatment. Another common feature exhibited by all the cohorts was regarding the bulkiness of the uterus which varies from 8.9 x 5.3 x 12.1; to 5.8 x 4.3 x 3.9cms. Endometrial thickness during the early proliferative phases measuring from 12.3 to 8.1mm were seen among the cohorts which was further reduced to normal limits. All the cohorts were featured with enlarged ovaries with multiple cysts denoting bilateral polycystic ovarian pattern with signs of severe endometriosis or early signs of adenomyosis. Few cohorts had small follicles or Nabothian cysts in the cervix. Further, the enlargement of the ovaries appeared to be normal with no visible cysts after a period of one year follow up study.

## CONCLUSIONS

To conclude, effective life style management with intermittent or periodic fasting following a naturalistic diet regime strictly avoiding processed foods, concentrating on whole grains, vegetables, fruits, sprouts and microgreens have shown dramatic improvisations in the health of women suffering from polycystic ovarian syndrome. Seed cycling has also helped the samples to regulate their menstrual cycles to a regular mode. Yoga and meditation along with 5 days of walking for 30 minutes a day with a mild sunbath increases immunity and wellbeing among the cohorts selected for the study.

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The study has not received any grants from any sources and has no conflict of interest in any manner.

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